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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,795	09/29/2003	Takayuki Gyohten	67161-108	1492

7590 02/24/2005

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EXAMINER	
YOHA, CONNIE C	

ART UNIT	PAPER NUMBER
2827	

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/671,795	GYOHTEN ET AL.	
	Examiner	Art Unit	
	Connie C. Yoha	2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-8* is/are rejected.

7)☐ Claim(s) *5,9 and 10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Connie C. Yoha

CONNIE C. YOHA
PRIMARY EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This office acknowledges receipt of the following items from the Applicant:

Papers submitted under 35 U.S.C. 119(a)-(d) have been placed of record in the file.

2. Information Disclosure Statement (IDS) filed on 9/23/03 was considered.

3. Claims 1-10 are presented for examination.

Claim Rejections - 35 USC ∋ 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-4, and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikeda, Pat. No. 6314045.

With regard to claim 1, Ikeda discloses a memory cell (fig. 8, M) storing data; a pair of bit lines (fig. 8, Bla1, /Bla1) connected to said memory cell; a sense amplifier (fig. 8, Saa1) provided corresponding to said pair of bit lines and activated in response to a sense amplifier activation signal; a pair of I/O lines (fig. 8, LI0i, /LIOi) transmitting said data input/output to/from said memory cell via said pair of bit lines; and a connection gate circuit, (fig. 1, 100) provided between said pair of bit lines and said pair of I/O lines when said sense amplifier activation signal and a column selection signal selecting said

pair of bit lines are both activated (col. 4, line 4-23) (col. 9, line 60-67) (also with regard to claim 4).

With regard to claim 2, Ikeda discloses wherein said connection gate circuit (fig. 1, 100) includes first (fig. 1, 101) and second gates (fig. 1, 102) connected in series between said pair of bit lines and said pair of I/O lines, said first gate (fig. 1, 101) conducts in response to said sense amplifier activation signal (fig. 1, ØN), and said second gate (fig. 1, 102) conducts in response to said column selection signal (fig. ØCB) (col. 4, line 4-7).

With regard to claim 3, Ikeda discloses wherein said connection gate circuit further includes an equalize circuit (fig. 8, PE) equalizing potentials of a pair of nodes connecting said first gate with said second gate (col. 7, line 44-61) (also with regard to claim 10).

With regard to claim 6, Ikeda discloses further comprising: a logic gate circuit (fig. 6, SiDi) activating its output signal (fig. 6, ØCBi) when said sense amplifier activation signal (fig. 6, ØCD) and said column selection signal (fig. 6, CBi) are activated; wherein said connection gate circuit (fig. 1, 100) includes a gate (fig. 1, 101) conducting in response to said output signal from said logic gate circuit (fig. 6, ØCBi) (col. 6, line 30-53) (also with regard to claim 7 and 8).

Allowable Subject Matter

5. Claim 5, 9-10 are objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not show the limitation of at least one first N type transistor turned on in response to said sense amplifier activation signal and activating said sense amplifier and said another sense amplifier; wherein said first gate is a second N type transistor, and said second N type transistor is formed in a free space of a region wherein said at least one first N type transistor is formed.

Prior art also does not disclose wherein said connection gate circuit further includes another gate conducting in response to a write mask signal, and said gate and said another gate are connected in series between said pair of bit lines and said pair of I/O lines.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Frankowsky et al (6608783), Sinha et al (6847569) and Sakamoto (644563) disclose a memory device having sense amplifier.

7. When responding to the office action, Applicants= are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

8. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b)).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (571) 272-1799. The examiner can normally be reached on Mon. - Fri. from 8:00 A.M. to 5:30 PM. The

examiner's supervisor, Hoai Ho, can be reached at (571) 272-1777. The fax phone number for this Group is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-0956.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov Should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Yoha

February 2004

CONNIE C. YOHA
PRIMARY EXAMINER